

REMARKS/ARGUMENTS

Please note in the as published application, U.S. 2005/0089298:

[0091] " One particularly suitable material for a patterned upper cladding is a UV curable siloxane polymer, synthesised for example by a condensation reaction as disclosed in the U.S. patent application Ser. No. 10/308562."

From the Oxford American College Dictionary, 2002; ISBN 0-399-14415-3: siloxane: a compound having a molecular structure based on a chain of alternate silicon and oxygen atoms, esp. (as in silicone) with organic groups attached to the silicon atoms.

[5], [6] As discussed in the conference call of June 20, applicants respectfully point out [0091] of the current application. This statement discloses the pertinent matter and identifies the source, U.S. patent application Ser. No. 10/308562, now U.S. 6,818,721. Examiner Dupuis examined the MPEP and CFR and advised applicants that the reference is not included in its entirety since it was not explicitly included by reference in its entirety in the original application.

Applicants also make the point, the phrase, "...UV curable siloxane polymer, synthesised for example by a condensation reaction...", may be restated as an "organosilicon condensate polymer" with equivalent meaning to one knowledgeable in the art.

[9] While the integrated optical package disclosed in '177 is called a "lens", it is not a lens as commonly understood. Certainly it is not a lens of the type that's the subject of the instant patent application. It is more properly termed a "mode converter", whose function is to gradually

change the size and/or shape of the optical mode propagating through it. Please note in '177, claim 1 refers to "an optical device having an asymmetric modal area...". The Penguin Dictionary of Science defines "lens" as "any device that causes a beam of rays to converge or diverge on passing through it. The optical lens is a portion of a transparent refracting medium, usually glass, bounded by two surfaces, generally curved". In contrast, the "lens" of '177 has no refractive surfaces, and no refraction of light occurs. Despite the examiner's statement "the lens focuses light", applicant's argue that it does no such thing. The '177 specification makes no mention of focusing or refraction or collimation of light.

A simple point of distinction is that the lens of the instant invention is a "refractive lens" or "a lens with at least one refractive surface". The lens of '177 is not a focusing or collimating lens; whereas independent claims 25 and 68, as amended, both require the lens to focus and collimate light. It is worth noting that the '177 lens still functions even if all surfaces are covered, i.e. there is no region where the lens is air clad. In the '177 specification, §5 L30-35; the '177 lens need have no air clad surfaces in the optical path, whereas the instant invention lens does.

Applicants understand Examiner's rebuttal to the definition of lens and have agreed to a "collimating" restriction. Applicants point out that as with all devices manufactured in high volumes there are departures from the ideal. The integrated waveguide of the instant invention focuses and collimates light within several degrees of the theoretically calculated design target.

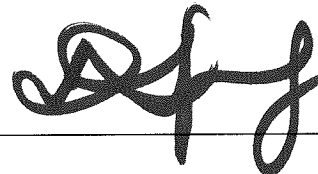
Please note, in Figure 1, "upper cladding" 17 does not extend over "lens 12"; as noted in §5 L30-35, "the lens may be [continuously] coated with a thin layer..."; nowhere is patterning of the upper cladding mentioned or suggested as desirable.

[12] Claim 68 is amended to include collimating. As discussed in the conference call of June 20, applicant is further restricting claim 68 to include a location for the patterning of the cladding material.

[17] As understood by one knowledgeable in the art, a siloxane polymer is a linear Si-O-Si chain with organic sidegroups, whereas Ghoshal's materials are branched. Additionally, Ghoshal's materials are not the "organosilicon condensate polymers" of the instant invention because they're not produced by a condensation reaction such as that disclosed in U.S. application 10/308562.

Applicants respectfully request Examiner to reconsider his finding of new matter for claims 35, 69, and 70. Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,



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